

COMMENTARY

Strategies to Increase Physical Activity

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ABSTRACT

The benefits of physical activity are well known and well publicized. Healthy People 2020 has determined that physical activity is one of their key interventions to improve health in America. Despite wide acceptance that physical activity is a low-cost alternative to disease treatment and prevention, most Americans still do not exercise the recommended minimum of 150 minutes per week. Underpinning such recommendations is the growing concern that unless we change our behavior around active living, health care costs to treat preventable disease will become unsustainable and have a substantial impact on the financial health of the US. For this reason, physicians, health care executives, and community leaders are working together to improve total health for all Americans. One key intervention to prevent preventable diseases and to make health care more affordable is to increase the percentage of Americans who are physically active. No single intervention will increase activity rates, but a group of interventions working together in synergy may be the stimulus needed to get Americans moving. The five strategies discussed in this paper include 1) measure physical activity as a vital sign; 2) encourage patients to be physically active at least 150 minutes per week; 3) create healthy environments by making it easier for patients to be physically active where they live, learn, work, play, and pray; 4) monitor disease incidence of patients who are physically active vs those who are not physically active; and 5) spread best practices.

INTRODUCTION

The benefits of physical activity are well known and well publicized. Despite wide acceptance that physical activity is a low-cost alternative to disease treatment and prevention, most Americans still do not exercise the recommended minimum of 150 minutes per week. During the past several years organizations like Kaiser Permanente,¹ Intermountain Health,² and Mayo Clinic³ have started to measure physical activity as a vital sign. In addition, many community groups and organizations have joined together in the Every Body Walk! campaign in an attempt to get America walking and overcome behavior change and social barriers that keep people from being physically active.⁴ During the past decade, the American College of Sports Medicine,⁵ the Centers for Disease Control and Prevention,⁶ and the National Institutes of Health⁷ have

all recommended regular physical activity as an option for those who are inactive. In addition, Healthy People 2020 now has physical activity as one of their key interventions to improve health in America.⁸

Underpinning such recommendations is the growing concern that unless we change our behavior around active living, health care costs to treat preventable disease will become unsustainable and have a substantial impact on the financial health of the US. For this reason, physicians, health care executives, and community leaders are working together to improve total health for all Americans. One key intervention to prevent preventable diseases and to make health care more affordable is to increase the percentage of Americans who are physically active.^{9,10}

Since the publication in 1996 of *Physical Activity and Health: A Report of the Surgeon General*¹¹ and the 2008

Physical Activity Guidelines for Americans,¹² there has been a widespread call for action to prevent preventable disease and to improve the care provided to individuals with chronic disease through physical activity. Strong evidence exists that both children and adults benefit from being physically active. Benefits of physical activity include lower risk of chronic diseases such as obesity,¹³ heart disease,¹⁴ diabetes,¹⁵ cancer,¹⁶ and depression.^{17,18} Exercise may even help improve academic performance^{19,20} and help us live longer.^{21,22}

Physical activity is widely recognized as a means for the primary prevention of chronic diseases. Moreover, activity has beneficial effects on an individual's health and well-being. Despite the benefits of regular physical activity, the percentage of physically inactive adults in the world is high. Environmental and policy approaches that aim to increase physical activity require evidence from studies investigating disease mechanisms as well as controlled clinical trials. A meta-analysis reported in 2007 that physical activity was associated with a reduction of the incidence of chronic major diseases.²¹ The strongest evidence exists for colon cancer, breast cancer, and cardiovascular diseases. The maximal magnitudes of the risk reduction reported were 22% for colorectal cancer, 75% for breast cancer, and 49% for cardiovascular diseases.

Researchers in Taiwan performed a prospective cohort study on 416,175 individuals between 1996 and 2008 to evaluate the effect physical activity has on life expectancy.²² Participants were placed in 5 categories on the basis of the amount of weekly exercise indicated in a self-administered questionnaire. The 5 categories were inactivity, low,

medium, high, and very high activity. Results showed that compared with individuals in the inactive group, those in the low activity group, who exercised for an average of 15 minutes per day, had a 14% reduced risk of all-cause mortality and had a 3-year longer life expectancy. Each additional 15 minutes of daily exercise beyond the minimum amount of 15 minutes a day further reduced all-cause mortality by 4% and all-cancer mortality by 1%. These benefits were applicable to all age groups and both sexes, and to those with cardiovascular disease risks.

Recent data show that areas with high obesity rates have low exercise rates and areas with low obesity rates have high exercise rates.⁹ Data from Healthy People 2020 demonstrate that we can subjectively measure physical activity as a vital sign, but we have not figured out how to substantially increase the percentage of the population who are physically active. Therefore just measuring exercise rates does not increase exercise rates. Social networking may be a new innovative way to increase exercise rates. During the past few years there has been a growing interest in understanding behavior change of an individual and of a population around the issue of physical activity. Changing behaviors is a key step to long-term health and disease prevention.¹⁰

The *2008 Physical Activity Guidelines for Americans* for children and adults recommends at least 60 minutes per day of physical activity for children and 30 minutes per day for adults. Despite evidence of the health benefits of physical activity as outlined above, most US adults and children are not meeting the recommendation in the *2008 Physical Activity Guidelines for Americans*. Data from Healthy People 2020 show that the percentage of adults engaging in regular physical activity increased only from 43.5% in 2008 to 48.8% in 2011.⁸ Data from the Centers for Disease Control and Prevention show that only 1 in 3 adults who have seen a physician have been advised to be physically active.²³

Despite advice from physicians, most patients do not meet daily exercise goals. Research has shown there are many

barriers to getting Americans to be more active.²⁴⁻²⁸ Although level of education and economic status seem to play a critical role in being physically active, there also appear to be other factors that prevent physical activity for all age groups. A central theme appears to be support from family and friends and the environment we live in. It is clear there is much work to do to help Americans be more active. This information suggests we need to use a broader systemic organized approach to understanding the correlates of physical activity. Just asking patients about physical activity is not enough to make them more physically active.

Physicians and community leaders need to better understand community influences on physical activity. Because current interventions have not significantly increased physical activity rates, community leaders including physicians must work together to understand how we can increase physical activity rates to prevent disease.²⁹⁻³⁴

The purpose of this article is to outline 5 strategies to increase physical activity in Americans. To achieve total health in America, we must encourage Americans to be more physically active. The goal is to increase the number of people who are physically active at least 30 minutes per day. A 5-step strategy to help America move is outlined below.

STRATEGIES TO INCREASE PHYSICAL ACTIVITY

Measure Physical Activity as a Vital Sign

Healthy People 2020 has been measuring activity rates by survey since 2008. Since that time, exercise rates in America have increased by only a few percentage points. One intervention that may significantly increase exercise rates in America is to implement a national process in which during each visit with a physician, the patient is asked the number of minutes per week the patient participates in a physical activity. This question lets the patient know that exercise is an important part of health just like other vital signs of health (eg, blood pressure). If the patient is not meeting exercise goals, then the physician can start a conversation

about the importance of physical activity in health. Ultimately, patients must be responsible for their health and their level of physical activity. Understanding what is expected of them is the first step. The second step is learning how to change behavior from inactivity to daily physical activity.

Encourage Patients to be Physically Active at Least 150 Minutes Per Week

Behavior change occurs when motivation aligns with ability and triggers.³⁵ Good health should be the main motivator for an individual to be physically active. As stated above, physical activity has many health benefits. Some patients will need education on how to be physically active (ability) and triggers to remind them to be physically active.

Behavioral interventions have been shown to significantly increase physical activity that results in improved control of diabetes and body mass index.³⁶ Behavior interventions can prompt patients to be more physically active. Brown et al reported that behavior interventions have been effective with diverse populations and in a variety of settings.²⁸ For example, one study showed that a point-of-decision prompt to encourage the use of stairs (ie, a sign next to the elevator that encourages using the stairs to improve health) was effective in increasing the number of people who choose to use the stairs instead of taking an elevator.³⁷

Promoting healthy behaviors is a key part of helping patients to be more active. The US Department of Health and Human Services published *Physical Activity and Health: A Report of the Surgeon General* in 1996.³⁸ This report supports the fact that activity is better than inactivity and activity has health care benefits. Patients can help themselves to be more active by building social networks. Social support interventions focus on changing physical activity behavior through building, strengthening, and maintaining social networks that provide supportive relationships for behavior change. These include setting up buddy systems with friends and families to hold each other accountable for meeting weekly physical activity goals.

Create Healthy Environments by Making It Easier to be Physically Active Where We Live, Learn, Work, Play, and Pray

Patients have complex lives and have many barriers to being physically active. The time has come to work together to create environments where it is easier to be physically active. This may include a family being physically active together on weekends, students participating in school-based physical education programs, employees participating in employer-based physical activity programs, and faith-based groups encouraging community members to be physically active at faith-based functions.

An identified barrier to physical activity is the lack of safe environments to walk, bike, and play. Creation of places for physical activity combined with education on where to find places to be physically active will certainly help adults and children to be more physically active. Physicians and patients should work together with community leaders to promote communitywide campaigns and support families who want to be physically active. These communitywide campaigns can form multidisciplinary teams that focus on using community resources to promote physical activity where we live, learn, work, play, and pray.^{39,40} These interventions need not be complicated and may be as simple as asking people to walk to school instead of driving. Other more difficult interventions may involve changing our infrastructure to promote health and wellness. These include healthy physical environments (eg, accessible stairwells for walking), healthy activity at work (eg, time and space for physical activities), and activating physicians and patients to work with employer groups to implement lifestyle management programs into the workplace environment.^{41,42}

Monitor Disease Incidence of Patients Who are Physically Active vs Those Who are not Physically Active

Healthy People 2020 has developed physical activity objectives and goals for the future. The objectives are aligned with the *2008 Physical Activity Guidelines for Americans* and set objectives and

goals for adults, children, schools, and physicians.⁸ Although the goals appear to be conservative, they do represent an initial attempt to get Americans moving more by the year 2020. Of note is the expectation for schools to increase the percentage of time students have for physical education and for physicians to counsel patients who will most benefit from physical activity (those with obesity and comorbidities).

Once we set goals it will be important for physicians and health plans to monitor disease incidence as it relates to physical activity to demonstrate the relationship between physical activity, wellness, and health care affordability. Physical activity will lower health care costs, prevent preventable disease, and save lives.⁴³ Monitoring the relationship between health care costs and disease incidence for individuals who are physically active compared with individuals who are not physically active will help us understand how physical activity can be used as medicine to treat and prevent disease.

Spread Best Practices

To help Americans meet physical activity goals, physicians and patients will need to identify and spread best practices.⁴⁴ To achieve total health in the future, we will need healthy people and healthy communities to promote and maintain health.⁴⁵ Because patients spend very little time with their physicians, our communities must be healthy and self-learning. Part of self-learning is identifying something that works and sharing with other communities. Every day thousands of patients look for ways to be more active. Currently there is no organized systematic Web-based approach to locate these services that also allows for community organizations to see the services previously accessed by a patient. In addition, there is no objective way to know whether a service provided to a community improves health care outcomes. We must develop a Web-based physical activity resource to help match patients with a specific community resource that will help patients be more active where they live, learn, work, play, and pray. This program will help

identify a physical activity best practice in one patient or community and share the resource or idea with another patient or community. Many communities have a plethora of opportunities; others do not. Sharing what works in one community with other communities will encourage America to be more active. One of the best ways to accomplish this goal is to publish data on disease incidence and physical activity on the Internet and to let communities around the country see which communities have lowered their disease incidence by becoming more active. Successful communities can share with other communities how they overcame barriers to success and became more physically active.⁴⁶

CONCLUSION

It is clear that the wide range of policies and programs described in this paper are needed to promote more physically active lifestyles for the patients we serve. Like tobacco use and obesity prevention, public health goals for physical activity are more likely to be achieved if policies and interventions are guided by approaches known to effectively meet the needs of all members of the communities we serve. To achieve success we should establish a program to evaluate and to learn from other programs so we can identify and spread best practices quickly and efficiently. The key to success will be overcoming barriers to helping patients become more physically active. Attention should be given to addressing both the challenges of individual behavior change and the challenges of overcoming environmental barriers that inhibit a populationwide effort to transition from an inactive to an active lifestyle. Resources for walking paths, bike paths, parks, and community outreach programs will encourage physical activity in daily living and should be linked to health care cost savings as an opportunity to prevent disease and make health care more affordable. Health care systems cannot do this alone and must partner with communities to achieve success.

To accomplish our goal of achieving high rates of physical activity for all

Americans, we will need behavior medicine specialists, sociologists, physiologists, recreation specialists, physicians, architects, city planners, and engineers working together to engage schools, worksites, religious institutions, and communities to create opportunities to promote physical activity. To create lasting behavior change, patients must do patient work, physicians must do physician work, community leaders must do community leader work, and government leaders must do government leader work. There is no easy fix to the inactivity crisis we have in America. Measuring blood pressure as a vital sign without adjusting treatment may not improve blood pressure control rates. However, holding physicians and patients accountable for blood pressure rates has significantly increased the percentage of the population whose blood pressure is now under control with medication and/or lifestyle management.

To improve physical activity rates, we must hold patients and physicians accountable for physical activity as a vital sign. The *first step* is to measure physical activity as a vital sign. The *second step* is to motivate patients who are inactive to be more physically active. The *third step* is to create environments and triggers that give people the ability to be more active. The *fourth step* is to show that patients who are physically active have lower disease incidence. The *fifth and final step* is to identify and to spread best practices. Although these strategies appear easy and straightforward, the implementation of these strategies across America will require hard work and widespread policy change. This should lead to longer-lasting changes where we live, learn, work, play, and pray that ultimately will prevent preventable disease, lower health care costs, and save lives. ❖

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Invigorator

The sovereign invigorator of the body is exercise,
and of all exercises walking is the best.

— Thomas Jefferson, 1734-1826, American Founding Father, principal author of the Declaration of Independence, and third President of the United States